PATENT

IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

On page 6, please replace paragraph [1012] with the following paragraph:

In one aspect of the invention, the above stated needs are addressed by communicating from the subscriber station to a sector <u>a</u> request to remove the sector from the subscriber station list, determining a reverse link quality metric from the subscriber station to the sector; and retaining the sector in the subscriber station list if said determined reverse link quality metric is sufficient. The subscriber station communicates the request to remove the sector from the subscriber station list if the subscriber station determines that a forward link quality metric from the sector to the subscriber station is insufficient.

On page 10, please replace paragraph [1034] with the following paragraph:

FIG.1 illustrates a conceptual diagram of a communication system capable of performing re-pointing in accordance with embodiments of the present invention, e.g., a communication system in accordance with the IS-856 standard. An AP 100 transmits data to an AT 104 over a forward link 106(1), and receives data from the AT 104 over a reverse link 108(1). Similarly, an AP 102 transmits data to the AT 104 over a forward link 106(2), and receives data from the AT 104 over a reverse link 108(2). In accordance with one embodiment, data transmission on the forward link occurs from one AP to one AT at or near the maximum data rate that can be supported by the forward link and the communication system. Other channels of the forward link, e.g., control channel, may be transmitted from multiple AP's to one AT. Reverse link data communication may occur from one AT to one or more AP's. The AP 100 and the AP 102 are connected to a controller 110 over backhauls 112(1) and 112(2). The term backhaul is used to mean a communication link between a controller and an AP. Although only two AT's and one AP are shown in FIG. 1, one of ordinary skill in the art recognizes that this is for pedagogical purposes only, and the communication system can comprise a plurality of AT's and AP's.

Attorney Docket No.: 010032B2

Customer No.: 23696

On page 15, please replace paragraph [1047] with the following paragraph:

The first (open) power control loop sets a level at which a reverse link quality metric is to be maintained. The signal quality is measured as the energy-per-bit-to-noise-plus-interference ratio Eb/Io of the reverse link signal received at an AP. The set level is referred to as the Eb/Io set point. The open power control loop adjusts the set point such that the desired level of performance, as measured by the <u>pasked packet-error-rate</u> (PER), is maintained. The second (closed) power control loop adjusts the transmit power of an AT such that the reverse link signal quality is maintained at the set level.

On page 16, please replace paragraph [1049] with the following paragraph:

In a wireless communications system, e.g., a wireless communications system in accordance with FIG. 1, an imbalance may occur between a forward link and a reverse link. Imbalance occurs when a forward link quality metric of a first sector is greater than the forward link quality metric of a second sector as measured at an AT, and a quality metric of the AT's reverse link as measured at the first sector is less than a quality metric as measured at the second sector. It has been observed that low levels of imbalance, e.g., less than 1dB are almost always present in a communication system. This level of imbalance appears to have little impact either on the forward link requested/served rate or on the DRC erasure rate on the reverse link. As used herein the term DRC erasure rate indicates a percentage of DRC messages that where is erased at the AP. Consequently, such an imbalance is accepted because the cost, e.g., outage associated with re-pointing DRC's in a dynamic communication system environment (changing channel conditions, AT mobility), far exceeds the small penalty in forward link sector throughput that may result.

On page 16, please replace paragraph [1050] with the following paragraph:

As the imbalance increases, the sector with the better forward link quality metric has a higher DRC erasure rate, due to worse reverse link quality metric. Consequently, the advantage of an AT pointing [[it's]] its DRC to a sector with a better forward link quality metric is reduced because the DRC erasure rate at the sector with the better forward link quality metric may be so large as to reduce the forward link throughput significantly. In an extreme case, if the DRC

Attorney Docket No.: 010032B2

Customer No.: 23696

PATENT

erasure [[Rate]] rate is 100%, regardless of the forward link quality metric, the AT is not served.

On the other hand, re-pointing the AT's DRC to a sector with a better reverse link quality metric

may not improve the forward link throughput because the sector's forward link quality metric is

reduced.

On page 17, please replace paragraph [1051] with the following paragraph:

Because the actual forward link throughput that an AT achieves is a function of the data

queues to the AT and forward link scheduling method, the forward link throughput cannot be

known apriori a priori. Therefore, a re-pointing method attempts to select the best sector

assuming that data queues are full and that the scheduling method would select the AT for

service. The re-pointing method further considers that from an AT standpoint, imbalance is an

issue only if it degrades the AT's throughput by one rate on the forward link. For example,

consider a static channel with the following conditions:

On page 18, please replace paragraph [1053] with the following paragraph:

Let us assume that in a communication system of FIG. 1, the forward link quality metric

106(1) is greater than the quality metric of the forward link 106(2), and the quality metric of the

reverse link 108(1) is less than the quality metric of the reverse link 108(1) 108(2), causing a

severe imbalance as described above. As discussed, the AT utilizes a pre-determined add

threshold and a pre-determined drop threshold for managing the AT's active set. In accordance

with one embodiment, if the SINR of the forward link 106(2) stays below the pre-determined

drop threshold for a period equal to or greater than a pre-determined time period, the AT requests

that the sector at AP 102 be removed from the AT active set. However, the above-discussed

example illustrated that removing a sector may negatively affect throughput.

On page 18, please replace paragraph [1054] with the following paragraph:

Therefore, set management method is implemented at the sectors. According to one

embodiment, when the AT determines that a forward link quality metric for a sector fell below a

drop threshold, the AT sends a request via a Route Update message to the access network to

remove the sector from the AT's active set. If the Access Network set management method

Attorney Docket No.: 010032B2

determines that the reverse link associated with this forward link has <u>a</u> sufficient quality metric, the drop threshold for that sector is modified in accordance with a minimal threshold at which a desired data rate can be decoded. For example, in accordance with one embodiment, the minimal forward link SINR threshold for decoding the lowest data rate of 38.4 kbps equals –11.5 dB. Therefore, if reception of the data rate of 38.4 kbps the modified drop threshold is set to –12 dB.

On page 18, please replace paragraph [1055] with the following paragraph:

In another embodiment, a change of the active set of the AT in response to the Route Update message is at the discretion of the AP. Therefore, when the AT determines that a forward link quality metric for a sector fell below a drop threshold, the AT sends a request via a Route Update message to the access network to remove the sector from the AT's active set. In order to preserve throughput, the access network set management method may determine that a reverse link associated with the forward link of the sector at AP 102 has a sufficient quality metric, and deny the request. By lowering the threshold, the AP 102 implicitly denies the AT's request to remove that AP from the active set. The AP's set management method retains the information of the AT request. Thus, if the associated reverse link SINR deteriorates, the AP's set management method may delete the particular pilot signal from the active set at a later instant even prior to another Route Update message from the AT, where the another Route Update message is sent on detecting other potential changes to the active set at the AT.

On page 20, please replace paragraph [1060] with the following paragraph:

One of ordinary skills in the art understands that extension to more than two sectors yields more variants. For example, only the sector with the highest forward link quality metric may be provided the power control commands from the reverse link with the highest quality metric. In another example, the two sectors with the highest forward link quality metric may be provided the power control commands from the reverse link with the highest quality metric. All these variants are contemplated as being within the are within the spirit and scope of the present invention.

Attorney Docket No.: 010032B2

Customer No.: 23696